

**SEMI-ANNUAL  
GROUNDWATER MONITORING  
SEPTEMBER 2001  
2626 INDUSTRIAL PARKWAY  
ELKHART, INDIANA**

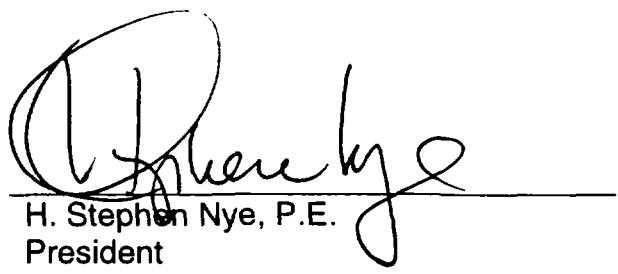
**NOVEMBER 28, 2001**

**PREPARED FOR  
ACCRA PAC GROUP**

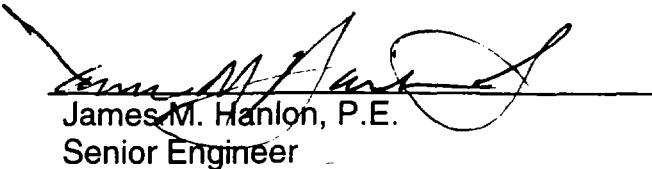
**PREPARED BY  
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283196

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## **1.0 INTRODUCTION**

This report concerns the September 19, 2001, semi-annual groundwater monitoring conducted by EIS Environmental Engineers, Inc., (EIS) for the property located at 2626 Industrial Parkway, Elkhart, Indiana (the Site). The monitoring was performed in accordance with the May 13, 1996, EIS report "Predesign and Compliance Monitoring Plan, Accra Pac Group/Warner Baker Site consent Decree, Civil Action No. H89-0113." Baseline groundwater monitoring was previously conducted by EIS on September 30, 1996. A report concerning the baseline-monitoring event was submitted by EIS to the US EPA on October 31, 1996.

The vapor extraction system was installed at the Site in accordance with the Final Design Submittal dated November 25, 1997. The operation of the vapor extraction system was initiated on June 25, 1998. The vapor extraction system was shut off on November 18, 1998 for the 1998/1999 winter season and was re-started on April 6, 1999. The vapor extraction system was shut off in October 1999 for the 1999/2000 winter season and was re-started on April 4, 2000. A sparge system was installed at the Site during June 2000 and began operation on July 15, 2000. The sparge and vapor extraction systems operated during 2000 until shut off in October 2000 for the 2000/2001 winter season. The sparge and vapor extraction systems were re-started on March 22, 2001, immediately after the completion of the March 2001 groundwater monitoring event. The sparge and vapor extraction systems were shut off on September 17, 2001, and re-started on September 19, 2001, immediately after the completion of the subject September 2001 groundwater monitoring event.

The purpose of the semi-annual monitoring is to determine groundwater contamination concentrations at compliance wells for comparison to the baseline groundwater test results in order to determine when groundwater remediation is complete. Table 1.1 lists the monitoring wells used for baseline and compliance groundwater monitoring.

This report has been prepared by EIS on behalf of the Accra Pac Group.

**TABLE 1.1**  
**MONITORING WELLS FOR BASELINE**  
**AND COMPLIANCE MONITORING**

WELL ID	SCREENED DEPTH BELOW GRADE (feet)	RELATIVE LOCATION OF WELL	PURPOSE
MW-1	16.3 - 26.3 <sup>(1)</sup>	Upgradient of site	Baseline
MW-4	16.8 - 26.8 <sup>(1)</sup>	Downgradient center of site	Baseline, Compliance
MW-7	30.0 - 40.0	Downgradient, northeast corner of site	Baseline, Compliance
MW-10B	49.5 - 54.5	Downgradient, northwest corner of site	Baseline, Compliance
MW-14	41.5 - 46.5	Adjacent to east pit	Baseline, Compliance
MW-15	39.7 - 44.7	Adjacent to west pit	Baseline, Compliance

Notes:

- (1) The screened depths for wells MW-1 and MW-4 are estimated from measured well depths and assume a ten-foot screened interval at the bottom of each well.

## **2.0 FIELD SAMPLING INFORMATION**

EIS collected groundwater samples on September 19, 2001, from the compliance monitoring wells MW-4, MW-7, MW-10B, MW-14 and MW-15 at the Site. A field duplicate with extra volume for matrix spike/duplicate matrix spike analysis was collected from well MW-7. Each sample was collected with a Teflon bailer immediately after purging three well volumes of water with a PVC bailer. The sampling equipment was washed with non-phosphate detergent and triple rinsed with deionized water prior to each collection. The purge and decontamination water were contained on-site for subsequent off-site disposal. Details regarding each sample collection were recorded on monitoring well sampling forms provided in Appendix C.

Chain-of-custody records were maintained by EIS staff and are provided in Appendix B. All samples were delivered to the EIS Analytical Services, Inc., laboratory on September 19, 2001.

### **3.0 GROUNDWATER FLOW DIRECTIONS**

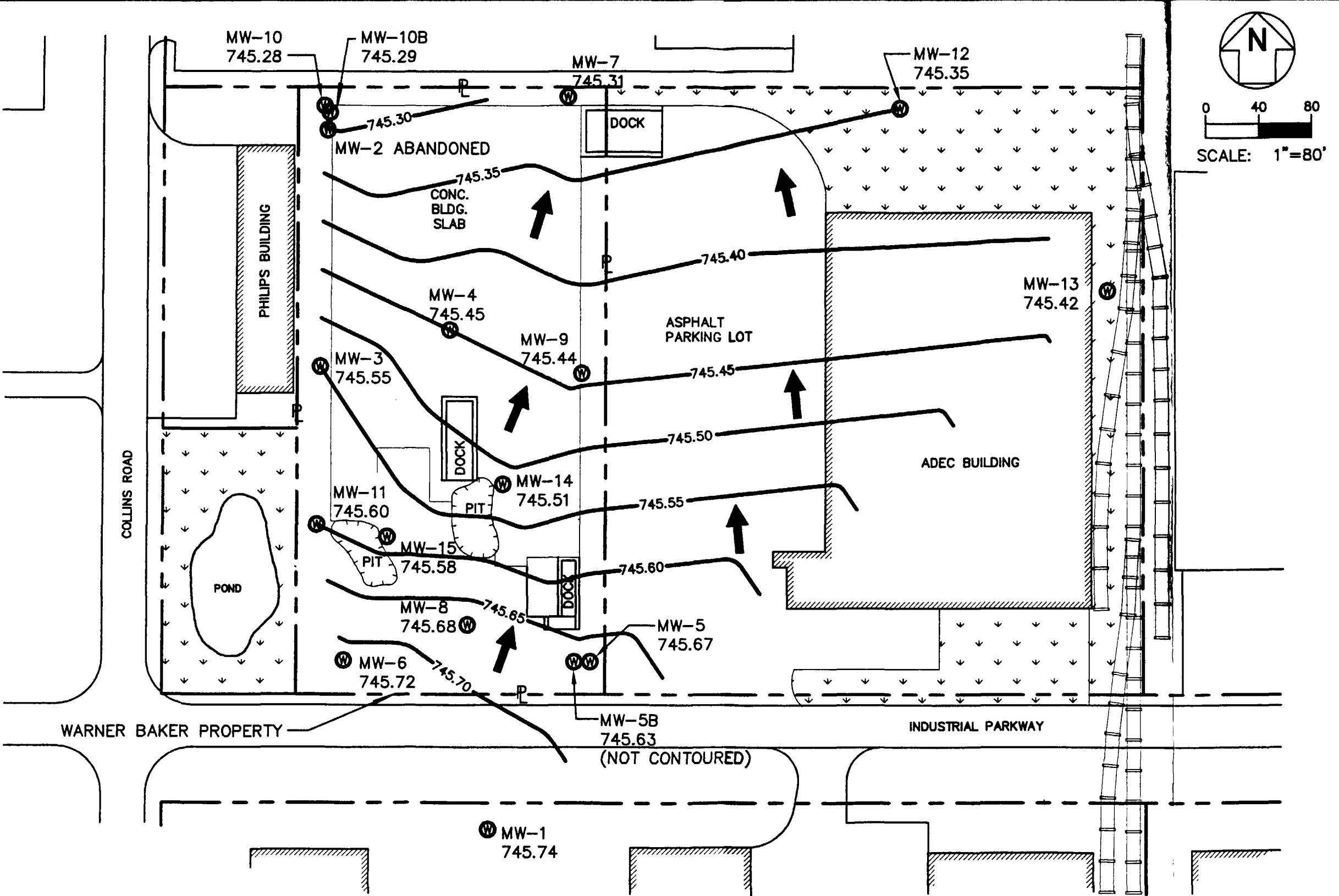
On September 19, 2001, EIS determined the static water levels (SWL) at the Site by measuring the depth to groundwater from the top of well casings to 0.01 foot. The SWL were measured at 13 wells at the Site, at well MW-1 located south of the Site, and at wells MW-12 and MW-13 located on the property adjacent to the east side of the Site. The SWL depth measurements for all 16 wells were conducted within a one-hour period of time and prior to the start of well sampling activities. The vapor extraction and sparge systems were shut off for at least 24 hours prior to the SWL measurements. Table 3.1 provides a summary of the SWL data. Figure 3.1 shows the SWL surface contours and groundwater flow directions at the Site as indicated by the September 19, 2001, SWL data. The groundwater flow directions show that compliance wells MW-7, MW-10B, MW-14 and MW-15 are generally downgradient with respect to the previously identified contaminant source areas in the vicinity of the two pits at the Site.

**TABLE 3.1**  
**STATIC WATER LEVEL DEPTH AND**  
**ELEVATION BASELINE DATA**  
**SEPTEMBER 19, 2001**

Well I.D.	Time of Check	SWL Depth from TOC <sup>(2)</sup> (Feet)	TOC <sup>(3)(4)</sup> Elev. (Feet, N.G.V.D.)	SWL <sup>(4)</sup> Elev. (Feet, N.G.V.D.)
MW-1	12:15 P.M.	10.01	755.75	745.74
MW-3	12:58 P.M.	10.86	756.41	745.55
MW-4	13:00 P.M.	10.67	756.115	745.45
MW-5	12:17 P.M.	6.07	751.74	745.67
MW-5B	12:19 P.M.	5.91	751.54	745.63
MW-6	12:21 P.M.	5.22	750.94	745.72
MW-7	12:45 P.M.	10.71	756.015	745.31
MW-8	12:20 P.M.	6.34	752.02	745.68
MW-9	12:41 P.M.	10.22	755.66	745.44
MW-10	12:52 P.M.	11.54	756.815	745.28
MW-10B	12:50 P.M.	8.55	753.835	745.29
MW-11	13:03 P.M.	7.93	753.53	745.60
MW-12	12:34 P.M.	7.80	753.145	745.35
MW-13	12:30 P.M.	5.50	750.915	745.42
MW-14	13:12 P.M.	10.96	756.47	745.51
MW-15	13:05 P.M.	10.17	755.75	745.58

Notes:

- (1) SWL = Static Water Level.
- (2) TOC = Top of Well Casing.
- (3) TOC Elev. = TOC Elevation per EIS Survey of March 22, 2001.
- (4) SWL Elev. = SWL Elevation.
- (5) The SVE and sparge systems were turned off on September 17, 2001, and then restarted on September 19, 2001, after all SWL checks and sampling were completed.



**LEGEND**

(W) MW-1 745.74 MONITORING WELL LOCATION AND GROUNDWATER ELEVATION IN FEET (NGVD) AS MEASURED ON 09-19-01. ALL MEASUREMENTS WERE MADE WITHIN A ONE HOUR TIME PERIOD. THE REMEDIATION SYSTEM WAS OFF FOR AT LEAST 24 HOURS PRIOR TO AND DURING THE SWL CHECKS.

— P — PROPERTY LINE

→ GROUNDWATER FLOW DIRECTION.

— 745.35 — GROUNDWATER ELEVATION CONTOUR IN FEET (NGVD). CONTOUR INTERVAL IS 0.05 FOOT.

FIGURE 3.1

ACCRA PAC  
2626 INDUSTRIAL PARKWAY, ELKHART, INDIANA  
GROUNDWATER FLOW DIRECTION MAP  
SEPTEMBER 19, 2001 DATA



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Drawn	DJB
Approved	JCS
Date	SEPT. 2001
Proj. No.	1092-0101-0
Sheet No.	FIGURE 3.1

## **4.0 ANALYTICAL RESULTS**

### **4.1 Baseline Monitoring Analytical Results**

Analytical reports, with Quality Control and Quality Assurance data, for each sample collected are provided in Appendix A. A summary of the analytical results from the September 19, 2001, monitoring event is provided in Table 4.1. Trend graphs showing the concentrations over time are provided in Appendix D.

### **4.2 Comparison of Results with Established Clean-up Levels**

The baseline analytical results for groundwater from compliance wells MW-4, MW-7, MW-10B, MW-14 and MW-15 were established during the September 30, 1996, baseline groundwater monitoring event. The 1996 baseline results are used to evaluate the results from compliance monitoring in order to determine if remediation is complete. The details for the evaluation procedure are provided in Section 2.0 of the May 13, 1996, EIS report "Predesign and Compliance Monitoring Plan." According with the terms of the Consent Order, the groundwater remediation will be considered complete when the total groundwater VOC concentrations at the compliance wells have stabilized at a 95% reduction of the total baseline VOC concentrations. On November 28, 2001, EIS requested that the USEPA clarify the appropriate procedure to calculate the 95% reduction of the total baseline VOC concentrations. In response to this request, Mr. Kenneth Theisen, the USEPA – Region 5 project manager, clarified that the remediation completion criteria would be based on the sum of VOC concentrations at all the compliance wells. Therefore, groundwater remediation will be considered complete when the sum of the total groundwater VOC concentrations determined by the compliance wells MW-4, MW-7, MW-10B, MW-14 and MW-15 have stabilized at a 95% reduction of the sum of the total baseline VOC concentrations for these wells. The total VOC concentrations, known as "VOC 15," are the sum of the analytical results for the following 15 VOC parameters:

1,2-Dichlorobenzene	Toluene
1,1-Dichloroethane	1,1,1-Trichloroethane
1,2-Dichloroethane	Trichloroethene
1,1-Dichloroethene	Trichlorofluoromethane
c-1,2-Dichloroethene	1,1,2-Trichlorotrifluoroethane
Dichlorofluoromethane	Vinyl Chloride
Ethylbenzene	Xylenes
Tetrachloroethene	

For the purposes of determining VOC 15, the parameters for which contamination were not detected are assigned a value of half of the Estimated Quantitation Limit (EQL) [A Sample Detection Limit (SDL) may be used if the laboratory reported SDL rather than EQL]. Table 4.2 lists the VOC 15 concentrations, associated data, clean-up levels, and an evaluation of whether or not the clean-up limits have been achieved. As is indicated in Table 4.2, the objective clean-up limits were not achieved as of the September 19, 2001, monitoring event. Therefore, remediation and semi-annual monitoring will continue. The next semi-annual groundwater sampling event is scheduled for March 2002.

**TABLE 4.1**  
**SUMMARY OF ANALYTICAL RESULTS**  
**SEPTEMBER 19, 2001<sup>(1)</sup>**

	RESULT (PPB)					
	WELL/SAMPLE ID					
VOC 15 <sup>(2)</sup> PARAMETERS	MW-4	MW-7	FD(MW-7) <sup>(4)</sup>	MW-10B	MW-14	MW-15
1,2-Dichlorobenzene	ND	9.5	ND	ND	8.2	ND
1,1-Dichloroethane	170	540	470	1,100	685	100
1,2-Dichloroethane	ND	3.2	ND	ND	5.4	ND
1,1-Dichloroethene	ND	5.2	ND	26	25	ND
c-1,2-Dichloroethene	16	38	40	28	19	ND
Dichlorofluoromethane	75 est.	15 est.	ND	ND	ND	ND
Ethylbenzene	ND	3.3	ND	34	87	158
Tetrachloroethene	5.5	4.7	ND	390	595	980
Toluene	ND	ND	ND	ND	6.4	ND
1,1,1-Trichloroethane	28	140	110	547	2,030	730
Trichloroethene	5.0	17	17	ND	3.6	ND
Trichlorofluoromethane	ND	ND	ND	ND	1,035	980
1,1,2-Trichlorotrifluoroethane	1,500	23	ND	8,000	1,300	30,400
Vinyl Chloride	ND	13	ND	ND	2.1	ND
Xylenes	ND	ND	ND	88	210	ND

Notes:

- (1) Semi-annual groundwater monitoring was conducted by EIS at the site located at 2626 Industrial Parkway, Elkhart, Indiana, on September 19, 2001.
- (2) VOC 15 Parameters = The list of 15 Volatile Organic Compounds (VOC) previously detected in groundwater at the Site. In accordance with the May 13, 1996, "Predesign and Compliance Monitoring Plan" the total concentration of these 15 VOC, identified as "VOC 15" is to be used to evaluate remediation at the Site. See text and Table 4.2 for details.
- (3) ND = Not Detected. See Analytical Reports in Appendix A for detection limits.
- (4) FD = Field Duplicate.

**TABLE 4.2**  
**DETERMINATION OF COMPLIANCE VOC 15 CONCENTRATIONS**  
**AND COMPARISON WITH BASELINE VOC 15**  
**CONCENTRATIONS AND CLEAN-UP LEVELS<sup>(1)</sup>**  
**SEPTEMBER 19, 2001 SAMPLING EVENT**

	COMPLIANCE WELL/SAMPLE ID							SITE TOTALS	
	MW-4	MW-7	FD(MW-7)	MW-10B	MW-14	MW-15			
Detected VOC (ppb) <sup>(2)</sup>	1,799.5	811.9	637	10,213	6,011.7	33,348			
Number Non-Detects <sup>(3)</sup>	3	5	1	2	4	6	1	3	3
EQL(ppb) <sup>(4)</sup>	5	10	2	4	10	20	50	10	20
Non-Detected VOC (ppb) <sup>(5)</sup>	65	10	210	140	5	1,700			
½ Non-Detected VOC (ppb) <sup>(6)</sup>	32.5	5	105	70	2.5	850			
Compliance VOC 15 (ppb) <sup>(7)</sup>	1,832	816.9	742	10,283	6,014.2	34,198			
Baseline VOC 15 (ppb) from 1996 <sup>(8)</sup>	4,111.6	1,751.6	1,751.6	16,530	99,870	82,850			
5% Baseline VOC 15 (ppb) from 1996 <sup>(9)</sup>	205.58	87.58	87.58	826.50	4,993.5	4,142.5			
							NO		
					Is Compliance VOC 15 < or = 5% Baseline VOC 15? <sup>(10)</sup>				

Notes: See next page for notes to Table 4.2.

**TABLE 4.2 (continued)**

**DETERMINATION OF COMPLIANCE VOC 15 CONCENTRATIONS  
AND COMPARISON WITH AND BASELINE VOC 15  
CONCENTRATIONS AND CLEAN-UP LEVELS<sup>(1)</sup>  
SEPTEMBER 19, 2001 SAMPLING EVENT**

**Notes to Table 4.2:**

- (1) Baseline data were calculated from the analyses of 15 target Volatile Organic Compounds (VOC 15) as obtained from the September 30, 1996, baseline groundwater monitoring event for the site located at 2626 Industrial Parkway, Elkhart, Indiana. See EIS report dated October 31, 1996, regarding the September 1996 baseline event and the May 13, 1996, EIS report, "Predesign and Compliance Monitoring Plan" for details for the determination and use of baseline results in the evaluation of future compliance monitoring results. On November 28, 2001, Mr. Kenneth Theisen, the USEPA – Region 5 project manager, clarified that the remediation completion criteria would be based on the sum of VOC concentrations at all the compliance wells. Therefore, groundwater remediation will be considered complete when the sum of the total groundwater VOC concentrations determined by the compliance wells MW-4, MW-7, MW-10B, MW-14 and MW-15 have stabilized at a 95% reduction of the sum of the total baseline VOC concentrations for these wells.
- (2) Detected VOC 15 = Total concentration of detected VOC from current monitoring event. See Table 4.1 and Analytical Reports in Appendix A for details.
- (3) Number Non-Detects = Number of target VOC parameters for which contamination was not detected in current monitoring event.
- (4) EQL = Estimated Quantitation Limit. A Reporting Detection Limit (RDL) may be used for evaluation purposes if the laboratory did not report an EQL. If more than one EQL or RDL is listed, parameter specific non-detected VOC values must be computed. See note 5 below.
- (5) Non-Detected VOC = The product obtained by multiplying the number of Non-Detected VOC by the EQL (or RDL). If more than one EQL or RDL is listed the Non-Detected VOC is the sum of the products obtained by multiplying number of Non-Detected VOC by the associated EQL or RDL values.
- (6) ½ Non-Detected VOC = The quotient obtained by dividing the Non-Detected VOC by 2.
- (7) Compliance VOC 15 = The sum obtained by adding the Detected VOC 15 to the ½ Non-Detected VOC. Compliance VOC 15 is a total value, comprising the sum of the 15 individual target VOC parameters. Note that VOC 15 values listed in the Analytical Reports (see Appendix A) may vary from the VOC 15 value listed in the above table because the values listed in the Analytical Reports were rounded.
- (8) Baseline VOC 15 = The sum of the 15 individual target VOC parameters as determined as a result of the 1996 baseline event.
- (9) 5% Baseline VOC 15 = 5% of the Baseline VOC 15 concentration. This value represents a 95% reduction in the total concentration of VOC 15 and is intended for use as a clean-up level in order to evaluate if remediation is complete.
- (10) If Compliance VOC 15 is less than or equal to 5% Baseline VOC 15, a 95% reduction in the concentration of VOC 15 is indicated and the clean-up level has been achieved. See the May 13, 1996, EIS report, "Predesign and Compliance Monitoring Plan" for actions to be taken once the clean-up levels have been achieved.

**APPENDIX A**  
**ANALYTICAL RESULTS**

**REPORT OF ANALYSIS**

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South Bend, IN 46635  
Tel No: 219-277-5715  
Fax No: 219-273-5693  
PO No:  
**Project Name:** Accra Pac

Report Date: 11/21/01  
EIS Order No: 010900191  
EIS Sample No: 078373  
EIS Project No: 2801-1092-0101-01

Client Sample ID: MW - 4  
Date Collected: 9/19/01  
Date Received: 9/20/01  
Collected By: J. Sporleder

This report presents results of analysis for your sample(s) received under our Order No above. This Number is to be used in all inquiries concerning this report. The EIS Sample No above, as well as your Sample ID, refer to the first sample in a multi-sample submission

**DEFINITIONS:**

MDL = Method Detection Limit normally achieved in the absence of interferences or other matrix difficulties.

RDL = Reporting Detection Limit achieved in your sample. If numerically greater than the MDL, dilutions were required in order to perform the analysis. If numerically less than the MDL, alternate techniques were employed.

nd = Not Detected at the RDL value. If present, result is less than this value.

< = Not Detected at the numerical value shown. If present, result is less than this value.

( ) = Result is Estimated due to matrix interferences.

CHAIN-OF-CUSTODY is enclosed if received with your sample submission.

DRINKING WATER CERTIFICATIONS: Chemistry = C-71-02 Bacteriology = M-76-5

  
\_\_\_\_\_  
QUALITY ASSURANCE OFFICER  
\_\_\_\_\_  
LABORATORY DIRECTOR

The data in this report has been reviewed and complies with EIS Quality Control unless specifically addressed above.

**SAMPLE RESULTS**

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CLIENT SAMPLE ID: MW - 4

Report Date: 11/21/01

CLIENT PROJECT: Accra Pac

EIS Sample No: 078373

SAMPLE TYPE: Water(Non DW)

EIS Order No: 010900191

Date Collected: 9/19/01

Date Received: 9/20/01

Parameter	Results	Units	RDL	MDL	Test Date	Analyst ID	Method
<b>INDIVIDUAL VOLATILES</b>							
Dichlorobenzene (1,2)	nd	µg/L	10	2	9/23/01	E04	8260 B
Dichloroethane (1,1)	170	µg/L	5	1	9/23/01	E04	8260 B
Dichloroethane (1,2)	nd	µg/L	5	1	9/23/01	E04	8260 B
Dichloroethene (1,1)	nd	µg/L	10	2	9/23/01	E04	8260 B
Dichloroethene (c-1,2)	16	µg/L	5	1	9/23/01	E04	8260 B
Dichlorofluoromethane	75 est	µg/L	25	5	9/23/01	E04	8260 B
Ethylbenzene	nd	µg/L	5	1	9/23/01	E04	8260 B
Tetrachloroethene	5.5	µg/L	5	1	9/23/01	E04	8260 B
Toluene	nd	µg/L	5	1	9/23/01	E04	8260 B
Trichloroethane (1,1,1)	28	µg/L	5	1	9/23/01	E04	8260 B
Trichloroethene	5.0	µg/L	5	1	9/23/01	E04	8260 B
Trichlorofluoromethane	nd	µg/L	10	2	9/23/01	E04	8260 B
Trichlorotrifluoroethane	1500	µg/L	10	2	9/23/01	E04	8260 B
Vinyl Chloride	nd	µg/L	10	2	9/23/01	E04	8260 B
Xylenes, Total	nd	µg/L	10	2	9/23/01	E04	8260 B
<b>TOTAL VOLATILES</b>							
VOC 15	1832	µg/L					8260 B

**SAMPLE RESULTS**

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CLIENT SAMPLE ID: MW - 7

Report Date: 11/21/01

CLIENT PROJECT: Accra Pac

EIS Sample No: 078374

SAMPLE TYPE: Water(Non DW)

EIS Order No: 010900191

Date Collected: 9/19/01

Date Received: 9/20/01

Parameter	Results	Units	RDL	MDL	Test Date	Analyst ID	Method
<b>INDIVIDUAL VOLATILES</b>							
Dichlorobenzene (1,2)	9.5	µg/L	4	2	9/23/01	E04	8260 B
Dichloroethane (1,1)	540	µg/L	2	1	9/23/01	E04	8260 B
Dichloroethane (1,2)	3.2	µg/L	2	1	9/23/01	E04	8260 B
Dichloroethene (1,1)	5.2	µg/L	4	2	9/23/01	E04	8260 B
Dichloroethene (c-1,2)	38	µg/L	2	1	9/23/01	E04	8260 B
Dichlorofluoromethane	15 est	µg/L	10	5	9/23/01	E04	8260 B
Ethylbenzene	3.3	µg/L	2	1	9/23/01	E04	8260 B
Tetrachloroethene	4.7	µg/L	2	1	9/23/01	E04	8260 B
Toluene	nd	µg/L	2	1	9/23/01	E04	8260 B
Trichloroethane (1,1,1)	140	µg/L	2	1	9/23/01	E04	8260 B
Trichloroethene	17	µg/L	2	1	9/23/01	E04	8260 B
Trichlorofluoromethane	nd	µg/L	4	2	9/23/01	E04	8260 B
Trichlorotrifluoroethane	23	µg/L	4	2	9/23/01	E04	8260 B
Vinyl Chloride	13	µg/L	4	2	9/23/01	E04	8260 B
Xylenes, Total	nd	µg/L	4	2	9/23/01	E04	8260 B
<b>TOTAL VOLATILES</b>							
VOC 15	817	µg/L					8260 B

**SAMPLE RESULTS**

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CLIENT SAMPLE ID: MW - 10B  
CLIENT PROJECT: Accra Pac  
SAMPLE TYPE: Water(Non DW)  
Date Collected: 9/19/01

Report Date: 11/21/01  
EIS Sample No: 078375  
EIS Order No: 010900191  
Date Received: 9/20/01

Parameter	Results	Units	RDL	MDL	Test Date	Analyst ID	Method
<b>INDIVIDUAL VOLATILES</b>							
Dichlorobenzene (1,2)	nd	µg/L	20	2	9/23/01	E04	8260 B
Dichloroethane (1,1)	1100	µg/L	10	1	9/23/01	E04	8260 B
Dichloroethane (1,2)	nd	µg/L	10	1	9/23/01	E04	8260 B
Dichloroethene (1,1)	26	µg/L	20	2	9/23/01	E04	8260 B
Dichloroethene (c-1,2)	28	µg/L	10	1	9/23/01	E04	8260 B
Dichlorofluoromethane	nd	µg/L	50	5	9/23/01	E04	8260 B
Ethylbenzene	34	µg/L	10	1	9/23/01	E04	8260 B
Tetrachloroethylene	390	µg/L	10	1	9/23/01	E04	8260 B
Toluene	nd	µg/L	10	1	9/23/01	E04	8260 B
Trichloroethane (1,1,1)	547	µg/L	10	1	9/23/01	E04	8260 B
Trichloroethene	nd	µg/L	10	1	9/23/01	E04	8260 B
Trichlorofluoromethane	nd	µg/L	20	2	9/23/01	E04	8260 B
Trichlorotrifluoroethylene	8000	µg/L	20	2	9/23/01	E04	8260 B
Vinyl Chloride	nd	µg/L	20	2	9/23/01	E04	8260 B
Xylenes, Total	88	µg/L	20	2	9/23/01	E04	8260 B
<b>TOTAL VOLATILES</b>							
VOC 15	10283	µg/L					8260 B

**SAMPLE RESULTS**

Page 5 of 8

CLIENT SAMPLE ID: MW - 14

Report Date: 11/21/01

CLIENT PROJECT: Accra Pac

EIS Sample No: 078376

SAMPLE TYPE: Water(Non DW)

EIS Order No: 010900191

Date Collected: 9/19/01

Date Received: 9/20/01

Parameter	Results	Units	RDL	MDL	Test Date	Analyst ID	Method
<b>INDIVIDUAL VOLATILES</b>							
Dichlorobenzene (1,2)	8.2	µg/L	2	2	9/23/01	E04	8260 B
Dichloroethane (1,1)	685	µg/L	1	1	9/23/01	E04	8260 B
Dichloroethane (1,2)	5.4	µg/L	1	1	9/23/01	E04	8260 B
Dichloroethene (1,1)	25	µg/L	2	2	9/23/01	E04	8260 B
Dichloroethene (c-1,2)	19	µg/L	1	1	9/23/01	E04	8260 B
Dichlorofluoromethane	nd	µg/L	5	5	9/23/01	E04	8260 B
Ethylbenzene	87	µg/L	1	1	9/23/01	E04	8260 B
Tetrachloroethene	595	µg/L	1	1	9/23/01	E04	8260 B
Toluene	6.4	µg/L	1	1	9/23/01	E04	8260 B
Trichloroethane (1,1,1)	2030	µg/L	1	1	9/23/01	E04	8260 B
Trichloroethene	3.6	µg/L	1	1	9/23/01	E04	8260 B
Trichlorofluoromethane	1035	µg/L	2	2	9/23/01	E04	8260 B
Trichlorotrifluoroethane	1300	µg/L	2	2	9/23/01	E04	8260 B
Vinyl Chloride	2.1	µg/L	2	2	9/23/01	E04	8260 B
Xylenes, Total	210	µg/L	2	2	9/23/01	E04	8260 B
<b>TOTAL VOLATILES</b>							
VOC 15	6014	µg/L					8260 B

**SAMPLE RESULTS**

Page 6 of 8

CLIENT SAMPLE ID: MW - 15

CLIENT PROJECT: Accra Pac

SAMPLE TYPE: Water(Non DW)

Date Collected: 9/19/01

Report Date: 11/21/01

EIS Sample No: 078377

EIS Order No: 010900191

Date Received: 9/20/01

Parameter	Results	Units	RDL	MDL	Test Date	Analyst ID	Method
<b>INDIVIDUAL VOLATILES</b>							
Dichlorobenzene (1,2)	nd	µg/L	200	2	9/23/01	E04	8260 B
Dichloroethane (1,1)	100	µg/L	100	1	9/23/01	E04	8260 B
Dichloroethane (1,2)	nd	µg/L	100	1	9/23/01	E04	8260 B
Dichloroethene (1,1)	nd	µg/L	200	2	9/23/01	E04	8260 B
Dichloroethene (c-1,2)	nd	µg/L	100	1	9/23/01	E04	8260 B
Dichlorofluoromethane	nd	µg/L	500	5	9/23/01	E04	8260 B
Ethylbenzene	158	µg/L	100	1	9/23/01	E04	8260 B
Tetrachloroethylene	980	µg/L	100	1	9/23/01	E04	8260 B
Toluene	nd	µg/L	100	1	9/23/01	E04	8260 B
Trichloroethane (1,1,1)	730	µg/L	100	1	9/23/01	E04	8260 B
Trichloroethene	nd	µg/L	100	1	9/23/01	E04	8260 B
Trichlorofluoromethane	980	µg/L	200	2	9/23/01	E04	8260 B
Trichlorotrifluoroethane	30400	µg/L	200	2	9/23/01	E04	8260 B
Vinyl Chloride	nd	µg/L	200	2	9/23/01	E04	8260 B
Xylenes, Total	nd	µg/L	200	2	9/23/01	E04	8260 B
<b>TOTAL VOLATILES</b>							
VOC 15	34198	µg/L					8260 B

**SAMPLE RESULTS**

Page 7 of 8

CLIENT SAMPLE ID: FD+MS/DMS

Report Date: 11/21/01

CLIENT PROJECT: Accra Pac

EIS Sample No: 078378

SAMPLE TYPE: Water(Non DW)

EIS Order No: 010900191

Date Collected: 9/19/01

Date Received: 9/20/01

Parameter	Results	Units	RDL	MDL	Test Date	Analyst ID	Method
<b>INDIVIDUAL VOLATILES</b>							
Dichlorobenzene (1,2)	nd	µg/L	20	2	9/23/01	E04	8260 B
Dichloroethane (1,1)	470	µg/L	10	1	9/23/01	E04	8260 B
Dichloroethane (1,2)	nd	µg/L	10	1	9/23/01	E04	8260 B
Dichloroethene (1,1)	nd	µg/L	20	2	9/23/01	E04	8260 B
Dichloroethene (c-1,2)	40	µg/L	10	1	9/23/01	E04	8260 B
Dichlorofluoromethane	nd	µg/L	50	5	9/23/01	E04	8260 B
Ethylbenzene	nd	µg/L	10	1	9/23/01	E04	8260 B
Tetrachloroethene	nd	µg/L	10	1	9/23/01	E04	8260 B
Toluene	nd	µg/L	10	1	9/23/01	E04	8260 B
Trichloroethane (1,1,1)	110	µg/L	10	1	9/23/01	E04	8260 B
Trichloroethene	17	µg/L	10	1	9/23/01	E04	8260 B
Trichlorofluoromethane	nd	µg/L	20	2	9/23/01	E04	8260 B
Trichlorotrifluoroethane	nd	µg/L	20	2	9/23/01	E04	8260 B
Vinyl Chloride	nd	µg/L	20	2	9/23/01	E04	8260 B
Xylenes, Total	nd	µg/L	20	2	9/23/01	E04	8260 B
<b>TOTAL VOLATILES</b>							
VOC 15	742	µg/L					8260 B

**SAMPLE RESULTS**

Page 8 of 8

CLIENT SAMPLE ID: Trip Blank

CLIENT PROJECT: Accra Pac

SAMPLE TYPE: Water(Non DW)

Date Collected: 9/17/01

Report Date: 11/21/01

EIS Sample No: 078379

EIS Order No: 010900191

Date Received: 9/20/01

Parameter	Results	Units	RDL	MDL	Test Date	Analyst ID	Method
<b>INDIVIDUAL VOLATILES</b>							
Dichlorobenzene (1,2)	nd	µg/L	2	2	9/23/01	E04	8260 B
Dichloroethane (1,1)	nd	µg/L	1	1	9/23/01	E04	8260 B
Dichloroethane (1,2)	nd	µg/L	1	1	9/23/01	E04	8260 B
Dichloroethene (1,1)	nd	µg/L	2	2	9/23/01	E04	8260 B
Dichloroethene (c-1,2)	nd	µg/L	1	1	9/23/01	E04	8260 B
Dichlorofluoromethane	nd	µg/L	5	5	9/23/01	E04	8260 B
Ethylbenzene	nd	µg/L	1	1	9/23/01	E04	8260 B
Tetrachloroethene	nd	µg/L	1	1	9/23/01	E04	8260 B
Toluene	nd	µg/L	1	1	9/23/01	E04	8260 B
Trichloroethane (1,1,1)	nd	µg/L	1	1	9/23/01	E04	8260 B
Trichloroethene	nd	µg/L	1	1	9/23/01	E04	8260 B
Trichlorofluoromethane	nd	µg/L	2	2	9/23/01	E04	8260 B
Trichlorotrifluoroethane	nd	µg/L	2	2	9/23/01	E04	8260 B
Vinyl Chloride	nd	µg/L	2	2	9/23/01	E04	8260 B
Xylenes, Total	nd	µg/L	2	2	9/23/01	E04	8260 B

**QUALITY ASSURANCE / QUALITY CONTROL DATA**  
**Method Specific Surrogate Compound Recoveries**

EIS Order ID: 010900191

Normal Test	Surrogate	QUALITY CONTROL LIMITS		QC Limits	
		Methods		Water	Soil
		Water	Soil		
Herbicides	2,4-Dichlorophenylaceticacid(DCAA)	615 / 8151A / 515.1	8151A	15 - 135	
Pesticides / PCB	2,4,5,6-Tetrachloro-m-xylene(TCMX)	608 / 8081A / 8082 / 508	8082	22 - 135	40 - 150
Pesticides / PCB	Decachlorobiphenyl(DCB)	608 / 8081A / 508	8082	22 - 135	40 - 150
SOC (svoc)	Perylene, d12	525.2		70 - 130	
SVOC (acid)	2-Fluorophenol	625 / 8270C	8270C	21 - 100	25 - 121
SVOC (acid)	Phenol, d5	625 / 8270C	8270C	10 - 94	24 - 113
SVOC (base/neutral)	Nitrobenzene, d5	625 / 8270C	8270C	35 - 114	23 - 120
SVOC (base/neutral)	2-Fluorobiphenyl	625 / 8270C	8270C	43 - 116	30 - 115
SVOC (acid)	2,4,6-Tribromophenol	625 / 8270C	8270C	10 - 123	19 - 122
SVOC (base/neutral)	Terphenyl, d14	625 / 8270C	8270C	33 - 141	18 - 137
TPH	Styrene	8015M	8015M	30 - 70	34 - 66
VOC / BETX / TPH	1,2-Dichloroethane, d4	624 / 8260B / 524.2	8260B	76 - 114	70 - 121
VOC / BETX / TPH	Toluene, d8	624 / 8260B / 524.2	8260B	86 - 115	74 - 121
VOC / BETX / TPH	Bromofluorobenzene(BFB)	624 / 8260B / 524.2	8260B	86 - 115	74 - 121

EIS Lab No	Client Sample ID	Method	Matrix	Surrogate	%Recovery
078373	MW - 4	8260 B	Water(Non DW)	1,2-Dichloroethane-d4 (SS)	98
		8260 B	Water(Non DW)	4-Bromofluorobenzene (SS)	113
		8260 B	Water(Non DW)	Toluene-d8 (SS)	98
078374	MW - 7	8260 B	Water(Non DW)	1,2-Dichloroethane-d4 (SS)	103
		8260 B	Water(Non DW)	4-Bromofluorobenzene (SS)	105
		8260 B	Water(Non DW)	Toluene-d8 (SS)	102
078375	MW - 10B	8260 B	Water(Non DW)	1,2-Dichloroethane-d4 (SS)	99
		8260 B	Water(Non DW)	4-Bromofluorobenzene (SS)	109
		8260 B	Water(Non DW)	Toluene-d8 (SS)	102
078376	MW - 14	8260 B	Water(Non DW)	1,2-Dichloroethane-d4 (SS)	99
		8260 B	Water(Non DW)	4-Bromofluorobenzene (SS)	104
		8260 B	Water(Non DW)	Toluene-d8 (SS)	99
078377	MW - 15	8260 B	Water(Non DW)	1,2-Dichloroethane-d4 (SS)	99
		8260 B	Water(Non DW)	4-Bromofluorobenzene (SS)	111
		8260 B	Water(Non DW)	Toluene-d8 (SS)	98
078378	FD+MS/DMS	8260 B	Water(Non DW)	1,2-Dichloroethane-d4 (SS)	101
		8260 B	Water(Non DW)	4-Bromofluorobenzene (SS)	107
		8260 B	Water(Non DW)	Toluene-d8 (SS)	101
078379	Trip Blank	8260 B	Water(Non DW)	1,2-Dichloroethane-d4 (SS)	96
		8260 B	Water(Non DW)	4-Bromofluorobenzene (SS)	109
		8260 B	Water(Non DW)	Toluene-d8 (SS)	102

Legend: -1 = Surrogates diluted out    -2 = Surrogates not used    ( ) = methods with different QC Limits

**QUALITY CONTROL DATA**  
**MATRIX SPIKE / DUPLICATE MATRIX SPIKE (MS/DMS)**

EIS Order: 010900191

EIS Lab #s in This Batch:

Comments Concerning This QC Batch:

QC Sample: 078378

078373 - 078379, 078415

None

Matrix: Groundwater

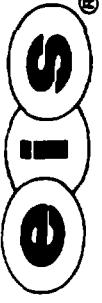
Test: VOC

Parameter	Back-ground	Spike Amount	Matrix Spike		Duplicate Spike		RPD	Quality Control Limits				QC Batch
			Result	% R	Result	% R		LCL	UCL	LCL	UCL	
Dichloroethene (1,1)	nd	50	50.3	101	53.8	108	7	0 - 14	61 - 145			QB01141
Toluene	nd	50	48.4	97	51.9	104	7	0 - 13	76 - 125			QB01141
Trichloroethene	17	50	61.8	90	72.6	111	22	0 - 14	71 - 120			QB01141

**LEGEND:**

1. Background = Sample Result
2. Spike amount may be adjusted for dilution used in sample analysis
3. % R = Percent Recovery of Spike
4. RPD = Relative Percent Difference of the spike recoveries
5. LCL = Lower Control Limit
6. UCL = Upper Control Limit
7. Units are normally those shown in the Analysis Report and are always the same for the Background and Spike

**APPENDIX B**  
**CHAIN-OF-CUSTODY DOCUMENTS**



## **CHAIN OF CUSTODY RECORD**

EIS PROJECT NO.: EIS CLIENT / PROJECT:

APG (Accra Pac)

**SAMPLERS:** (Print Name & Sign)  
Josh Sporleder - Jh Sporleder

一〇一

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**APPENDIX C**  
**FIELD SAMPLING FORMS**



## EIS MONITORING WELL SAMPLING FORM

Well I.D.: MW-4  
 Sample I.D.: MW-4  
 Collectors: J.C. Sporleder  
 EIS Lab No.: 079373

Sample Date 9/19/01 14:55 am/pm  
 Client: Accra Pac  
 Project No.: 1092-010101  
 Location: 2626 Industrial Parkway Elkhart, IN  
 Laboratory: EIS Analytical Services, Inc.

PRE-PURGE

Well Material: (PVC/Stainless/Galvanized/ ) Inside Diameter 2 "  
 Elevation Top of Casing (TOC) 756.115' Ft Grade Elevation ≈ 754.12 Ft  
 SWL Depth from TOC 10.66 Ft SWL Elevation 745.46 Ft  
 Well Depth from TOC 26.70 Ft TOC to Grade ≈ 2.0 Ft  
 Height of Water Column 16.04 Ft Well Depth from Grade ≈ 24.7 Ft  
 Volume/Foot Casing ( $d^2 \times 0.04079$ ) 0.1632 Gal/Ft  
 Volume of Water column 2.6 Gal

Time & Date Purged 14:30 am/pm 9/19/01

Calculated Volume to Purge 8 Gal

Actual Volume Purged 8 Gal

Purged: dry/ 1 2 3 4 5 6 7 8 9 10 Well Volumes

Purged With: Pump - Type \_\_\_\_\_ Tubing Size \_\_\_\_\_

Make \_\_\_\_\_

Tubing Type \_\_\_\_\_

Bailer (PVC/SS/Teflon/ ) Rope Material: Polyprop

Nonphosphate Det.:

Equip. Dedicated? YES/NO Decontaminated With: DI water Rinses.

Time & Date Sampled 14:55 am/pm 9/19/01

Weather Conditions: Sky: 6 Ground: Dry, Pavement Wind: 5-10 mph SW

Temp: ≈ 66°F Humidity: High/Low/ Precipitation: None

SWL (Depth From TOC) Prior to Sampling 10.66 Ft

Height of Water Column Prior to Sampling 16.04 Ft

Recovery to 100 % of original water column depth.

Sampled With: Pump Type \_\_\_\_\_ Tubing Size \_\_\_\_\_

Make \_\_\_\_\_

Tubing Type \_\_\_\_\_

Bailer (PVC/SS/Teflon/ ) Rope Material: Polyprop

Nonphosphate Det.:

Equip. Dedicated? YES/NO Decontaminated With: DI water Rinses.

SAMPLING

Water Appearance: (Clear) Slightly/very turbid) (Color: gray/brown/ )  
 Slight unusual odor

Containers Collected: (Size & type

Preservatives

40 cc	Glass Vial
-	-
-	-
-	-
-	-

HCl

Were metals filtered prior to preservation? YES/NO/METALS NOT SAMPLED

Filtration Method: (gravity/vacuum/pressure); Device Type \_\_\_\_\_

Filter (Cartridge/Paper) Type \_\_\_\_\_ Size \_\_\_\_\_ Pore \_\_\_\_\_

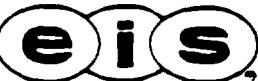
Were samples iced after collection? YES/NO \_\_\_\_\_

Field Tests: Hydrolab-or-pH Meter Type \_\_\_\_\_ S.C. Meter Type \_\_\_\_\_

OTHER

Test	Result
Temp:	— °C
pH:	— pH
S.C.:	— umhos

Notes: \*TOC elev. Per EIS Survey of 9-25-76.



## EIS MONITORING WELL SAMPLING FORM

Well I.D.: MW-108  
 Sample I.D.: MW-108  
 Collectors: Josh Sporleder  
 EIS Lab No.: 078375

Sample Date 9/19/01 13:50 am/pm  
 Client: Accra Pac  
 Project No.: 1092-010101  
 Location: 2626 Industrial Parkway Elkhart, IN  
 Laboratory: EIS Analytical Services, Inc.

**PRE-PURGE**

Well Material: (PVC/Stainless/Galvanized/ ) Inside Diameter 2 " Ft Grade Elevation  $\approx$  754.235 Ft  
 Elevation Top of Casing (TOC) 753.835 m SWL Depth from TOC 8.58 Ft SWL Elevation 745.255 Ft  
 SWL Depth from TOC 54.10 Ft TOC to Grade 0.4 Ft  
 Height of Water Column 45.52 Ft Well Depth from Grade  $\approx$  54.50 Ft  
 Volume/Foot Casing ( $d^2 \times 0.04079$ ) 0.1632 Gal/ft  
 Volume of Water column 7.428 Gal

Time & Date Purged 13:50 am/pm 9/19/01  
 Calculated Volume to Purge 22.28 Gal  
 Actual Volume Purged 23.00 Gal  
 Purged: dry/ 1 2 3 4 5 6 7 8 9 10 Well Volumes  
 Purged With: Pump - Type = Tubing Size =  
 Make = Tubing Type =  
 Bailer (PVC/SS/Teflon/ = ) Rope Material: (Polyprop Nonphosphate Det. %  
 Equip. Dedicated? YES/NO Decontaminated With: DI water Rinses

**SAMPLING**

Time & Date Sampled 13:50 am/pm 9/19/01  
 Weather Conditions: Sky: cloudy Ground: cement Wind: 10 MPH  
 Temp: 69°F Humidity: High/Low % Precipitation: mist  
 SWL (Depth From TOC) Prior to Sampling 8.58 Ft  
 Height of Water Column Prior to Sampling 45.52 Ft  
 Recovery to 100 % of original water column depth.  
 Sampled With: Pump Type = Tubing Size =  
 Make = Tubing Type =  
 Bailer (PVC/SS/Teflon/ = ) Rope Material (Polyprop Nonphosphate Det. %  
 Equip. Dedicated? YES/NO Decontaminated With: DI water Rinses

Water Appearance: (Clear) Slightly/very turbid) (Color: gray/brown)

Containers Collected:	(Size & type	Preservatives
40 cc	Glass Vial	HCl
-	-	-
-	-	-
-	-	-
-	-	-

Were metals filtered prior to preservation? YES/NO METALS NOT SAMPLED

**OTHER**

Filtration Method: (gravity/vacuum/pressure); Device Type =  
 Filter (Cartridge/Paper) Type = Size = Pore =  
 Were samples iced after collection? YES/NO =  
 Field Tests: Hydrolab-or-pH Meter Type = S.C. Meter Type =  
 Test Result  
 Temp: = °C Notes: \*TOC elev. Per EIS Survey of 9-25-76.  
 pH: = pH \*\*Slight odor was noticed in purge water  
 S.C.: = umhos



## EIS MONITORING WELL SAMPLING FORM

Well I.D.: MW-14  
 Sample I.D.: MW-14  
 Collectors: Josh Sporleder  
 EIS Lab No.: 078376

Sample Date 9/19/01 15:40 am/<sup>pm</sup>  
 Client: Accra Pac  
 Project No.: 1092-010101  
 Location: 2626 Industrial Parkway Elkhart, IN  
 Laboratory: EIS Analytical Services, Inc.

PURGE PRE-PURGE

Well Material: (PVC/Stainless/Galvanized/ ) Inside Diameter 2 "  
 Elevation Top of Casing (TOC) 756.47 ft Grade Elevation ≈ 754.07 ft  
 SWL Depth from TOC 10.96 ft SWL Elevation 745.51 ft  
 Well Depth from TOC 49.10 ft TOC to Grade ≈ 2.4 ft  
 Height of Water Column 38.14 ft Well Depth from Grade ≈ 46.70 ft  
 Volume/Foot Casing ( $d^2 \times 0.04079$ ) 0.1632 Gal/ft  
 Volume of Water column 6.224 Gal

Time & Date Purged 15:40 am <sup>pm</sup> 9/19/01

Calculated Volume to Purge 18.67 Gal

Actual Volume Purged 19.0 Gal

Purged: dry/ 1 2 3 4 5 6 7 8 9 10 Well Volumes

Purged With: Pump - Type \_\_\_\_\_ Tubing Size \_\_\_\_\_

Make \_\_\_\_\_ Tubing Type \_\_\_\_\_

(Bailer) (PVC/SS/Teflon/ ) Rope Material: (Polyprop)

Nonphosphate Det.:

Equip. Dedicated? YES/NO Decontaminated With: DI water Rinses.

Time & Date Sampled 15:40 am <sup>pm</sup> 9/19/01

Weather Conditions: Sky: cloudy Ground: cement Wind: 15-20 MPH

Temp: 70°F Humidity: High/Low Precipitation: mist

SWL (Depth From TOC) Prior to Sampling 10.96 ft

Height of Water Column Prior to Sampling 38.14 ft

Recovery to 100 % of original water column depth.

Sampled With: Pump Type \_\_\_\_\_ Tubing Size \_\_\_\_\_

Make \_\_\_\_\_ Tubing Type \_\_\_\_\_

(Bailer) (PVC/SS/Teflon/ ) Rope Material (Polyprop)

Nonphosphate Det.:

Equip. Dedicated? YES/NO Decontaminated With: DI water Rinses.

Water Appearance: (Clear Slightly/very turbid) (Color: gray/brown/gray)

Containers Collected:	(Size & type	Preservatives
	40 cc	Glass Vial
	-	HCl
	-	-
	-	-
	-	-

Were metals filtered prior to preservation? YES/NO METALS NOT SAMPLED

Filtration Method: (gravity/vacuum/pressure); Device Type \_\_\_\_\_

Filter (Cartridge/Paper) Type \_\_\_\_\_ Size \_\_\_\_\_ Pore \_\_\_\_\_

Were samples iced after collection? YES/NO \_\_\_\_\_

Field Tests: Hydrolab-or-pH Meter Type \_\_\_\_\_ S.C. Meter Type \_\_\_\_\_

Test Result \_\_\_\_\_ Notes: \*TOC elev. Per EIS Survey of 9-25-96.

Temp: \_\_\_\_\_ °C

pH: \_\_\_\_\_ pH

S.C.: \_\_\_\_\_ umhos

OTHER



## EIS MONITORING WELL SAMPLING FORM

Well I.D.: MW-15  
 Sample I.D.: MW-15  
 Collectors: Josh Sporleder  
 EIS Lab No.: 028372

Sample Date 9/19/01 14:55 am pm  
 Client: Acera Park  
 Project No.: 1092-0101  
 Location: 2626 Industrial Parkway, Elkhart, IN  
 Laboratory: EIS Analytical Services, Inc.

PRE-PURGE

Well Material: (PVC) Stainless/Galvanized/ Inside Diameter 2 "  
 Elevation Top of Casing (TOC) 755.75 ft Grade Elevation ≈ 753.25 ft  
 SWL Depth from TOC 10.22 Ft SWL Elevation 745.53 Ft  
 Well Depth from TOC 47.50 Ft TOC to Grade ≈ 2.5 Ft  
 Height of Water Column 37.28 Ft Well Depth from Grade ≈ 45.00 Ft  
 Volume/Foot Casing ( $d^2 \times 0.04079$ ) 0.1632 Gal/ft  
 Volume of Water column 6.084 Gal

PURGE

Time & Date Purged 14:25 am 9/19/01  
 Calculated Volume to Purge 18.252 Gal  
 Actual Volume Purged 19.0 Gal  
 Purged: dry/ 1 2 3 4 5 6 7 8 9 10 Well Volumes  
 Purged With: Pump - Type = Tubing Size =  
 Make = Tubing Type =  
Bailer (PVC/SS/Teflon/ = ) Rope Material: (Polyprop)  
 Nonphosphate Det. s Decontaminated With: DI water Rinses.

SAMPLING

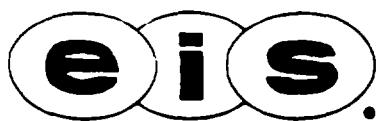
Time & Date Sampled 14:55 am 9/19/01  
 Weather Conditions: Sky: cloudy Ground: weeds Wind: 15 MPH  
 Temp: 70°F Humidity: High Low/% Precipitation: mist  
 SWL (Depth From TOC) Prior to Sampling 10.23 Ft  
 Height of Water Column Prior to Sampling 37.27 Ft  
 Recovery to 99.97 % of original water column depth.  
 Sampled With: Pump Type = Tubing Size =  
 Make = Tubing Type =  
Bailer (PVC/SS/Teflon/ = ) Rope Material (Polyprop)  
 Nonphosphate Det. s Decontaminated With: DI water Rinses.

OTHER

Water Appearance: Clear Slightly very turbid Color: gray/brown  
 Containers Collected: (Size & type Preservatives  

<u>40 cc</u>	<u>Glass Vial</u>	<u>HCl</u>
<u>-</u>	<u>-</u>	<u>-</u>

 Were metals filtered prior to preservation? YES/NO METALS NOT SAMPLED  
 Filtration Method: (gravity/vacuum/pressure); Device Type  
 Filter (Cartridge/Paper) Type - Size - Pore -  
 Were samples iced after collection? YES/NO -  
 Field Tests: Hydrolab-or-pH Meter Type - S.C. Meter Type -  
 Test Result  
 Temp: - °C Notes: \*TOC elev. Per EIS Survey of 9-25-96.  
 pH: - pH  
 S.C.: - umhos



EIS ENVIRONMENTAL ENGINEERS, INC.

SHEET 1 OF 1  
 PROJECT Accra Pac/Werner Baker Compliance Monitor  
 PROJECT NO. 1092-010101 DATE 9-19-01  
 PREPARED BY JCS/JMS SCALE NA

### SWL Field Data Sheet

Staff: Josh & JC Sporleder

Date of Check: 9-19-01

Equipment: Slope Indicator

Accra Pac / Warner Baker Site: 2626 Industrial Parkway, Elkhart.

Well I.D.	Time of Check	SWL Depth from TOC <sup>m</sup> (Feet)	TOC <sup>m</sup> Elev. (Feet, N.G.V.D.)	SWL <sup>m</sup> Elev. (Feet, N.G.V.D.)
MW-1	12:15	<del>3.95</del> <del>10.06</del> 10.01	755.75	745.74
MW-3	12:58	10.86	756.41	745.55
MW-4	13:00	10.67	756.115	745.445
MW-5	12:17	6.07	751.74	745.67
MW-5B	12:19	5.91	751.54	745.63
MW-6	12:21	5.22	750.94	745.72
MW-7	12:45	10.71	756.015	745.305
MW-8	12:20	6.34	752.02	745.68
MW-9	12:41	10.22	755.66	745.44
MW-10	12:52	11.54	756.815	745.275
MW-10B	12:50	8.55	753.835	745.285
MW-11	13:03	7.93	753.53	745.60
MW-12	12:34	7.80	753.145	745.345
MW-13	12:30	5.50	750.915	745.415
MW-14	13:12	10.95	756.47	745.51
MW-15	13:05	10.17	755.75	745.58

← New Lock

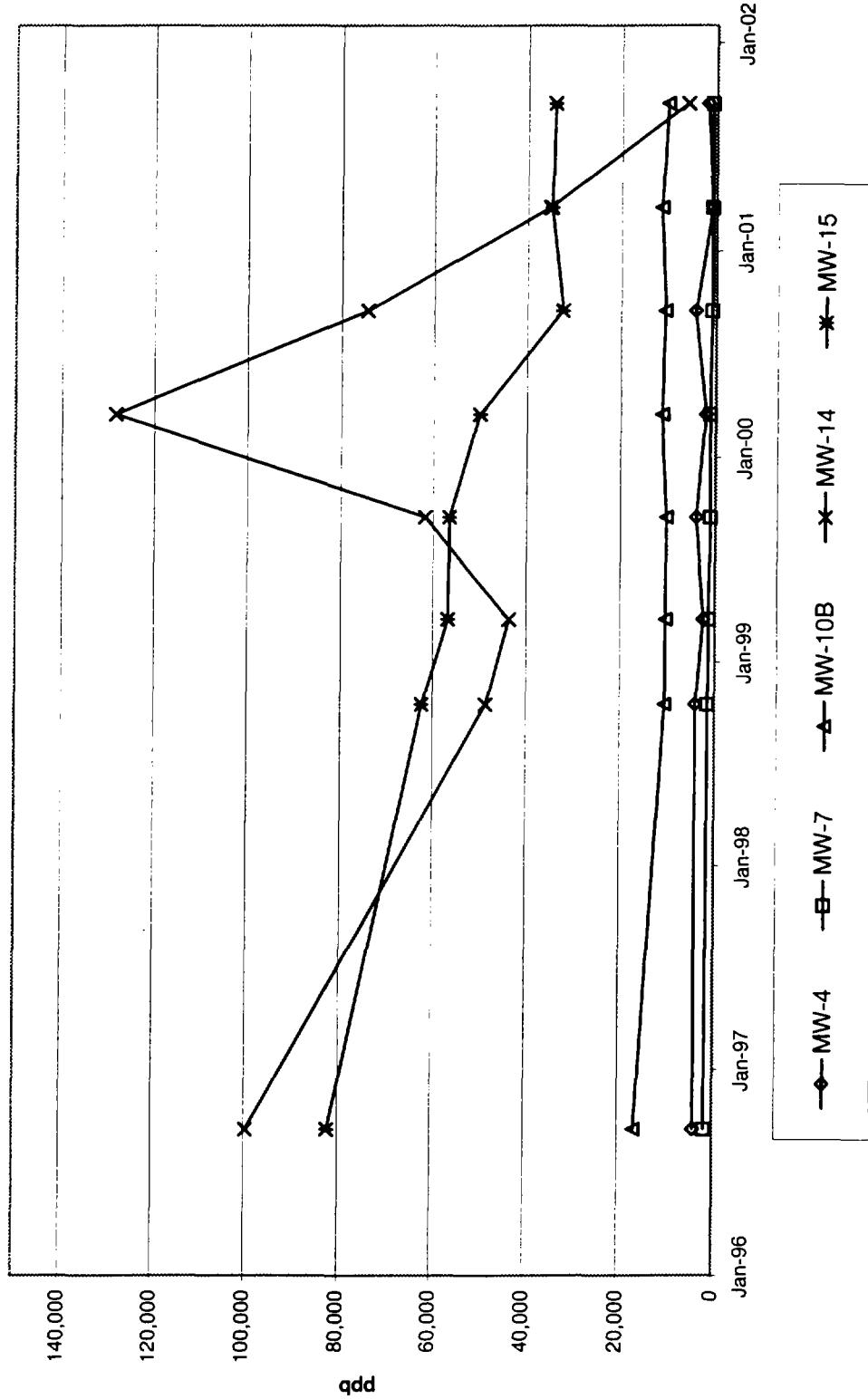
#### Notes:

The remediation system has been off since 9-17-01. The remediation system was turned on at 15:05 pm, 9-19-01 after all SWL checks and all groundwater sampling was completed.

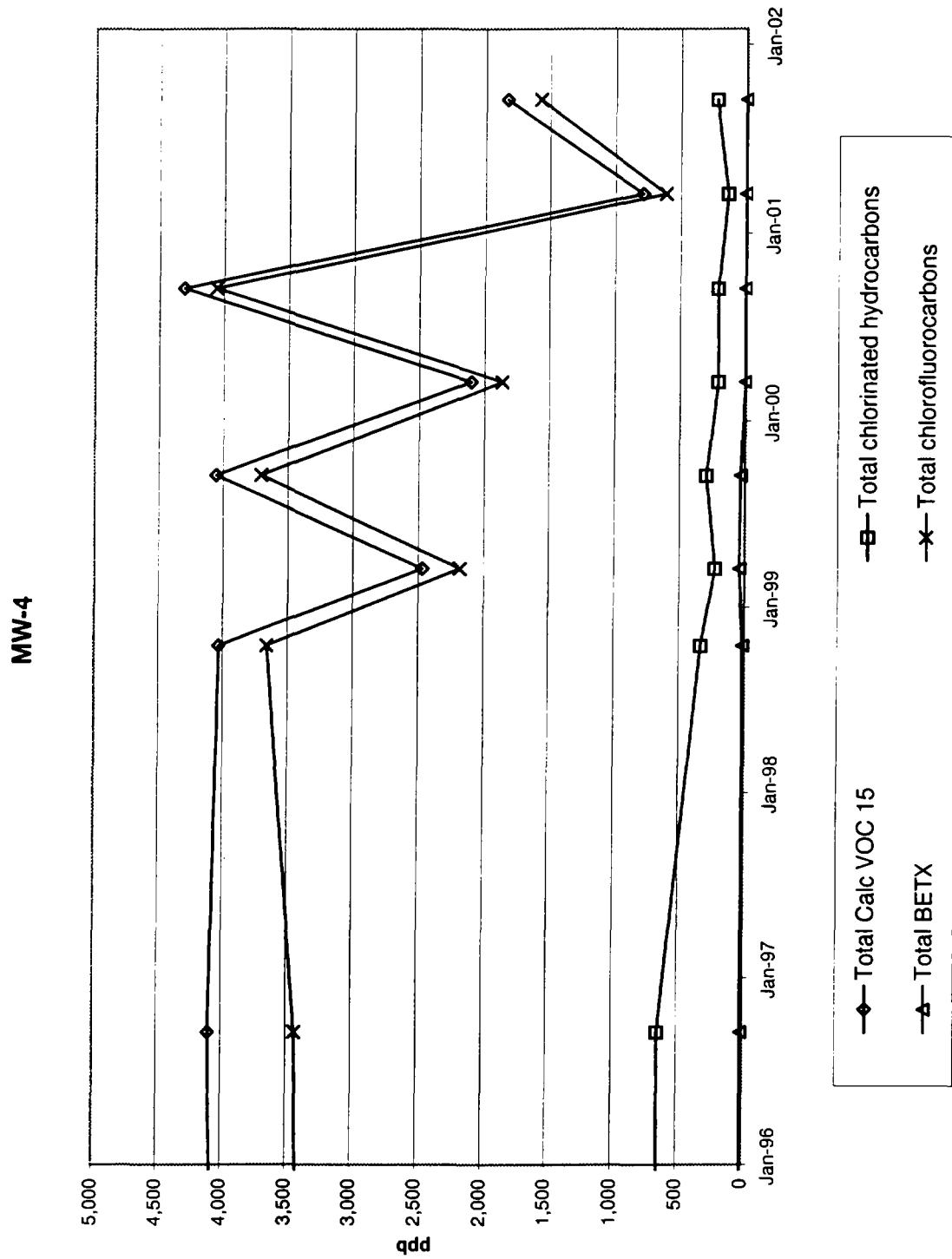
**APPENDIX D**  
**TREND GRAPHS**

**Accra Pac - Warner Baker Site  
2626 Industrial Parkway  
Elkhart, Indiana**

VOC 15



**Accra Pac - Warner Baker Site  
2626 Industrial Parkway  
Elkhart, Indiana**



**Accra Pac - Warner Baker Site  
2626 Industrial Parkway  
Elkhart, Indiana**

**Groundwater Monitoring Data**

MW-4	9/30/1996	10/1/1998	3/30/1999	9/30/1999	3/29/2000	9/25/2000	3/22/2001	9/19/2001
1,2-Dichlorobenzene	<1	<10	<10	<10	<10	<10	<10	<10
1,1-Dichloroethane	580	220	120	190	170	180	110	170
1,2-Dichloroethane	<1	9.8	7	5.8	5.9	<5	<5	<5
1,1-Dichloroethene	<1	<10	<10	<10	<10	<10	<10	<10
c-1,2-Dichloroethene	6.6	7.4	22	6	<5	<5	18	16
Dichlorofluoromethane	43	90	74	86	63	47	36	75
Ethylbenzene	<1	<5	9.4	6.5	<5	<5	<5	<5
Tetrachloroethene	7.6	15	8.2	11	7.4	<5	<5	5.5
Toluene	<1	<5	<5	<5	<5	<5	<5	<5
1,1,1-Trichloroethane	36	66	46	74	20	29	9.7	28
Trichloroethene	6.4	13	12	7.1	5	<5	<5	5
Trichlorofluoromethane	<1	<10	<10	<10	<10	<10	<10	<10
1,1,2-Trichlorotrifluoroethane	3390	3570	2110	3620	1800	4010	580	1500
Vinyl chloride	14	<10	12	<10	<10	<10	<10	<10
Xylenes	13	14	32	26	<10	<10	<10	<10
Total Calc VOC 15	4099.1	4030.2	2470.1	4054.9	2103.8	4306	791.2	1832
Total chlorinated hydrocarbons	650.6	331.2	227.1	293.9	208.3	209	137.7	225
Total BETX	13	14	41.4	32.5	0	0	0	0
Total chlorofluorocarbons	3433	3660	2184	3706	1863	4057	616	1575

**NOTE:**

For graphing purposes, non-detect values are calculated as follows:

Total Calc. VOC 15;

Non-detect values=1/2 detection limit.

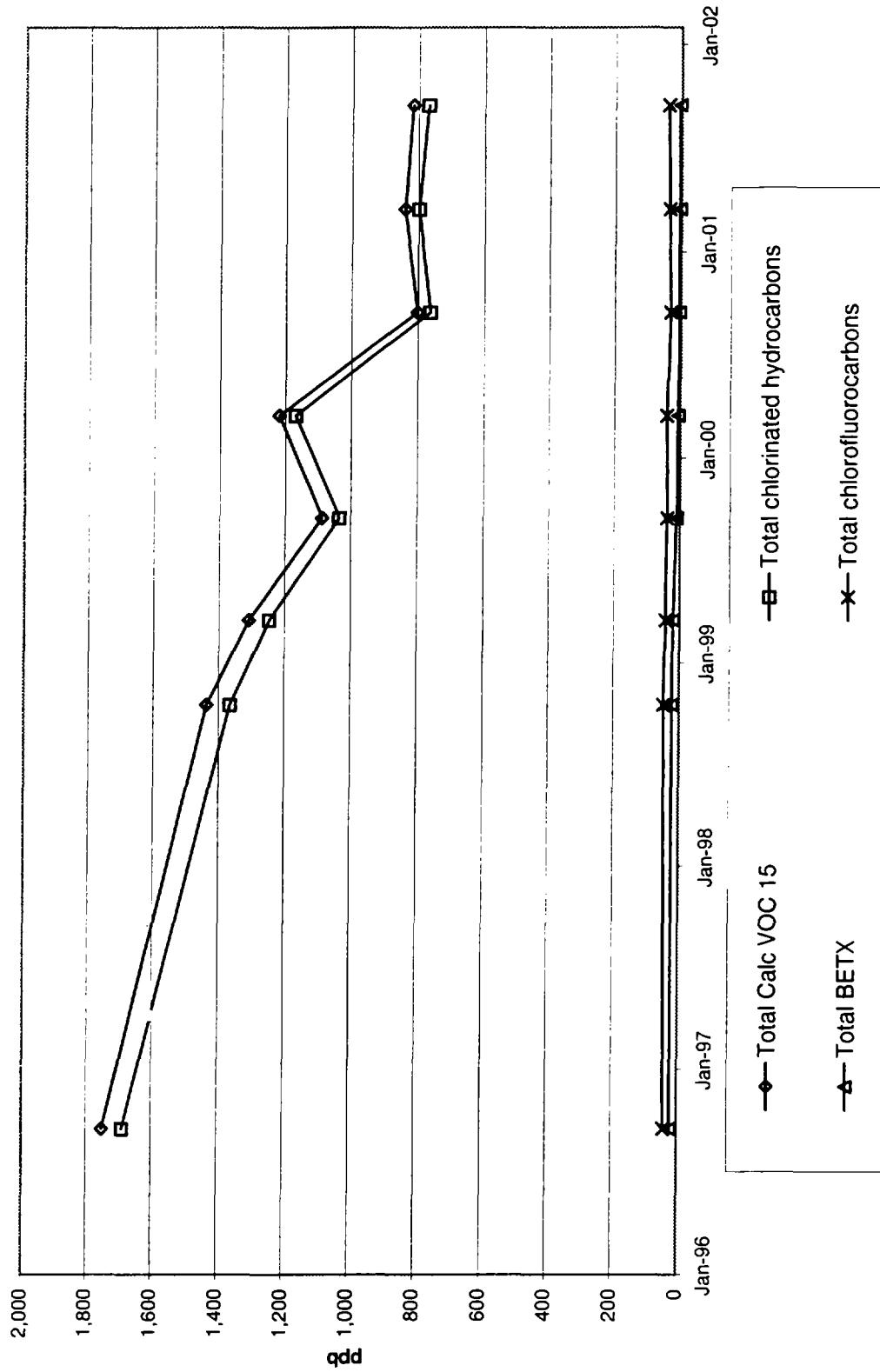
Total chlorinated hydrocarbons: Non-detect values=zero.

Non-detect values=zero.

Total chlorofluorocarbons: Non-detect values=zero.

**Accra Pac - Warner Baker Site  
2626 Industrial Parkway  
Elkhart, Indiana**

**MW-7**



**Accra Pac - Warner Baker Site  
2626 Industrial Parkway  
Elkhart, Indiana  
Groundwater Monitoring Data**

MW-7	9/30/1996	10/1/1998	3/30/1999	9/30/1999	3/29/2000	9/25/2000	3/22/2001	9/19/2001
1,2-Dichlorobenzene	25	17	17	14	6.6	10	8.9	9.5
1,1-Dichloroethane	1020	1030	940	810	910	550	570	540
1,2-Dichloroethane	5.6	11	11	7.6	7.3	3.1	3.6	3.2
1,1-Dichloroethene	24	9.2	9.1	6.9	8.7	6.8	10	5.2
c-1,2-Dichloroethene	110	37	34	30	45	35	51	38
Dichlorofluoromethane	<1	28	26	21	23	15	20	15
Ethylbenzene	8	11	9.7	7.2	3.7	3.5	3.1	3.3
Tetrachloroethene	6.3	6.7	5.9	5.1	5.3	3.3	4.1	4.7
Toluene	2.8	4	3.3	2.2	2	<2	<2	<2
1,1,1-Trichloroethane	440	200	180	130	160	130	120	140
Trichloroethene	8.3	11	13	10	9.1	11	13	17
Trichlorofluoromethane	<1	<4	<4	<4	<4	<4	<4	<4
1,1,2-Trichlorotrifluoroethane	40	19	16	18	17	15	14	23
Vinyl chloride	50	44	37	20	16	14	18	13
Xylenes	9.6	6.4	5.9	<4	<4	<4	<4	<4
Total Calc VOC 15	1750.6	1436.3	1309.9	1086	1217.7	801.7	840.7	817
Total chlorinated hydrocarbons	1689.2	1365.9	1247	1033.6	1168	763.2	798.6	771
Total BETX	20.4	21.4	18.9	9.4	5.7	3.5	3.1	3
Total chlorofluorocarbons	40	47	42	39	40	30	34	38

**NOTE:**

For graphing purposes, non-detect values are calculated as follows:

Total Calc. VOC 15:

Total chlorinated hydrocarbons:

Total BETX:

Total chlorofluorocarbons:

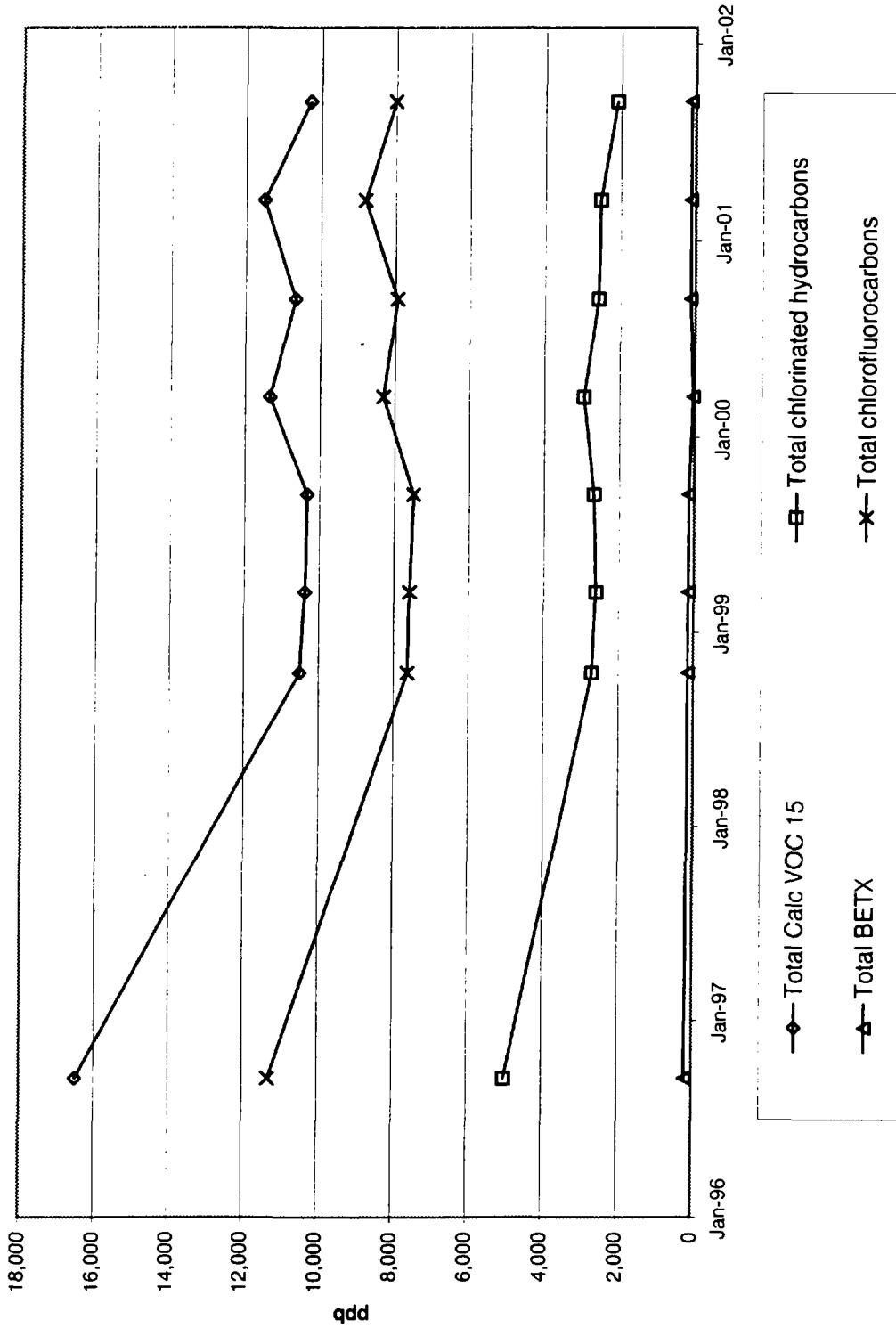
Non-detect values= 1/2 detection limit.

Non-detect values=zero.

Non-detect values=zero.

**Accra Pac - Warner Baker Site  
2626 Industrial Parkway  
Elkhart, Indiana**

MW-10B



**Accra Pac - Warner Baker Site  
2626 Industrial Parkway  
Elkhart, Indiana**

**Groundwater Monitoring Data**

MW-10B	9/30/1996	10/1/1998	3/30/1999	9/30/1999	3/29/2000	9/25/2000	3/22/2001	9/19/2001
1,2-Dichlorobenzene	<1	<20	<20	<20	<20	<20	<20	<20
1,1-Dichloroethane	2460	1470	1430	1540	1740	1550	1570	1100
1,2-Dichloroethane	15	10	12	10	11	10	11	<10
1,1-Dichloroethene	84	39	43	42	45	36	48	26
c-1,2-Dichloroethene	44	39	32	31	30	24	29	28
Dichlorofluoromethane	<1	180	550	470	800	800	620	<50
Ethylbenzene	39	29	33	31	31	22	27	34
Tetrachloroethene	440	280	290	350	370	320	320	390
Toluene	<1	<10	<10	10	11	10	<10	<10
1,1,1-Trichloroethane	1940	870	810	700	760	640	560	547
Trichloroethylene	<1	<10	<10	<10	<10	<10	<10	<10
Trichlorofluoromethane	810	170	200	180	190	130	120	<20
1,1,2-Trichlorotrifluoroethane	10500	7270	6830	6830	7310	7010	8070	8000
Vinyl chloride	18	<20	<20	<20	<20	<20	<20	<20
Xylenes	160	120	120	110	<20	100	100	88
Total Calc VOC 15	16512	10507	10380	10329	11333	10677	11505	10283
Total chlorinated Hydrocarbons	5001	2708	2617	2673	2956	2580	2538	2091
Total BETX	199	149	153	151	42	132	127	122
Total chlorofluorocarbons	111310	7620	7580	7480	8300	7940	8810	8000

**NOTE:**

For graphing purposes, non-detect values are calculated as follows:

Total Calc. VOC 15:

Non-detect values=1/2 detection limit.

Total chlorinated hydrocarbons: Non-detect values=zero.

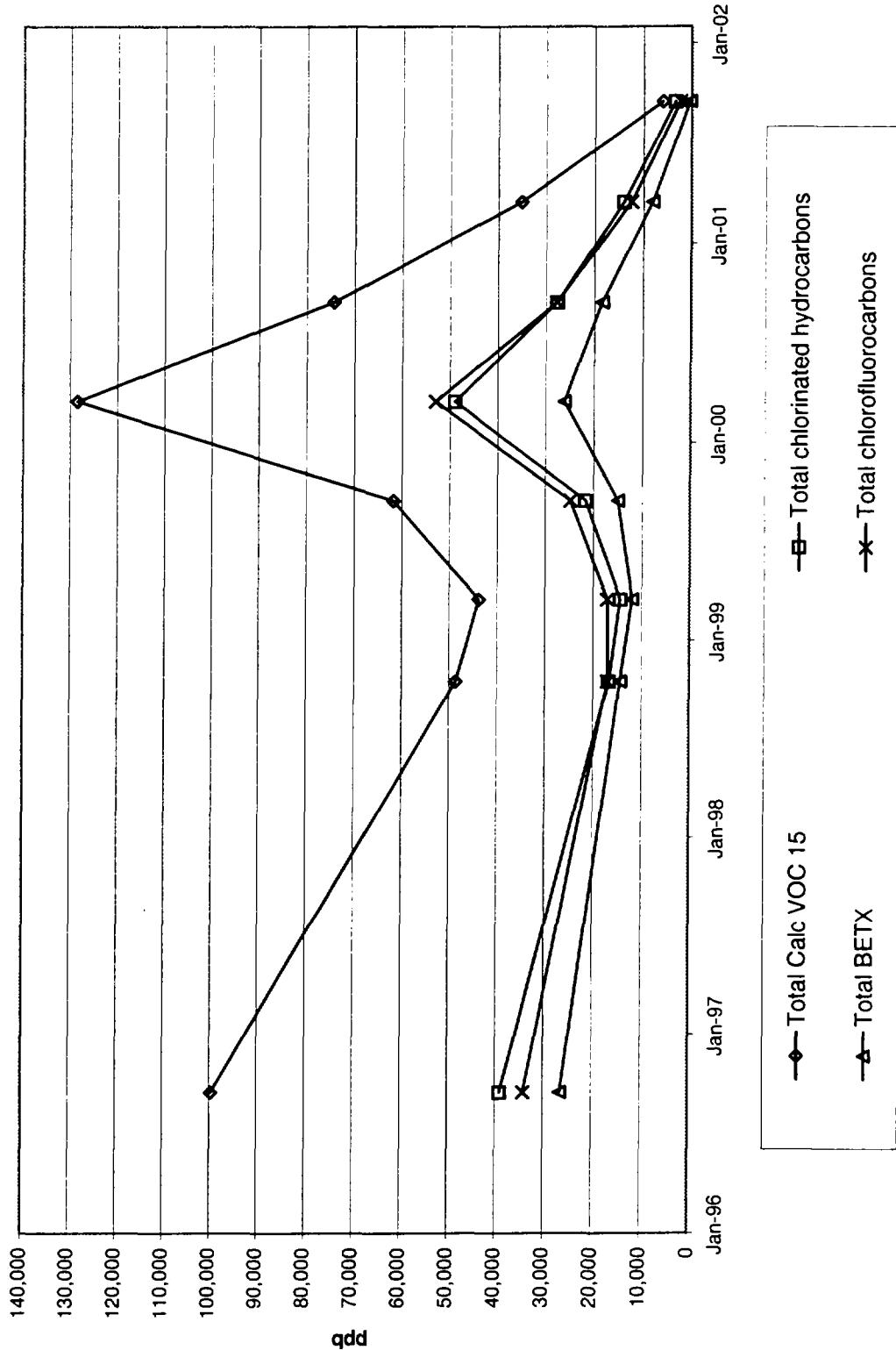
Total BETX:

Non-detect values=zero.

Total chlorofluorocarbons:

**Accra Pac - Warner Baker Site  
2626 Industrial Parkway  
Elkhart, Indiana**

**MW-14**



**Accra Pac - Warner Baker Site  
2626 Industrial Parkway  
Elkhart, Indiana  
Groundwater Monitoring Data**

MW-14								
	9/30/1996	10/1/1998	3/30/1999	9/30/1999	3/29/2000	9/25/2000	3/22/2001	9/19/2001
1,2-Dichlorobenzene	<1	<200	<200	<200	<200	<200	<200	8.2
1,1-Dichloroethane	4370	2020	1770	2290	3340	1760	1080	685
1,2-Dichloroethane	<1	<100	<100	<100	<100	<100	<100	5.4
1,1-Dichloroethene	1030	550	550	710	1560	810	600	25
C-1,2-Dichloroethene	<1	<100	<100	<100	<100	<100	<100	19
Dichlorofluoromethane	820	660	690	890	1560	750	<500	<5
Ethylbenzene	630	350	380	480	770	390	220	87
Tetrachloroethene	3290	2080	1850	2540	4520	3300	1720	595
Toluene	23300	12700	10100	12800	22300	16100	6870	6.4
1,1,1-Trichloroethane	30300	12100	10200	16100	39500	21900	10600	2030
Trichloroethene	<1	<100	<100	<100	<100	<100	<100	3.6
Trichlorofluoromethane	18600	8170	8690	13700	32800	15600	7010	1035
1,1,2-Trichlorotrifluoroethane	14700	8210	7690	10200	18600	11400	5490	1300
Vinyl chloride	<1	<200	<200	<200	<200	<200	<200	2.1
Xylenes	2580	1390	1450	1720	3100	2000	1000	210
Total Calc VOC 15	99622.5	48580	43720	61780	128400	74360	35190	6014
Total chlorinated hydrocarbons	38990	16750	14370	21640	48920	27770	14000	3373
Total BETX	26510	4440	11930	15000	26170	18490	8090	303
Total chlorofluorocarbons	34120	17040	17070	24790	52960	27750	12500	2335

**NOTE:**

For graphing purposes, non-detect values are calculated as follows:

Total Calc. VOC 15: Non-detect values=1/2 detection limit.

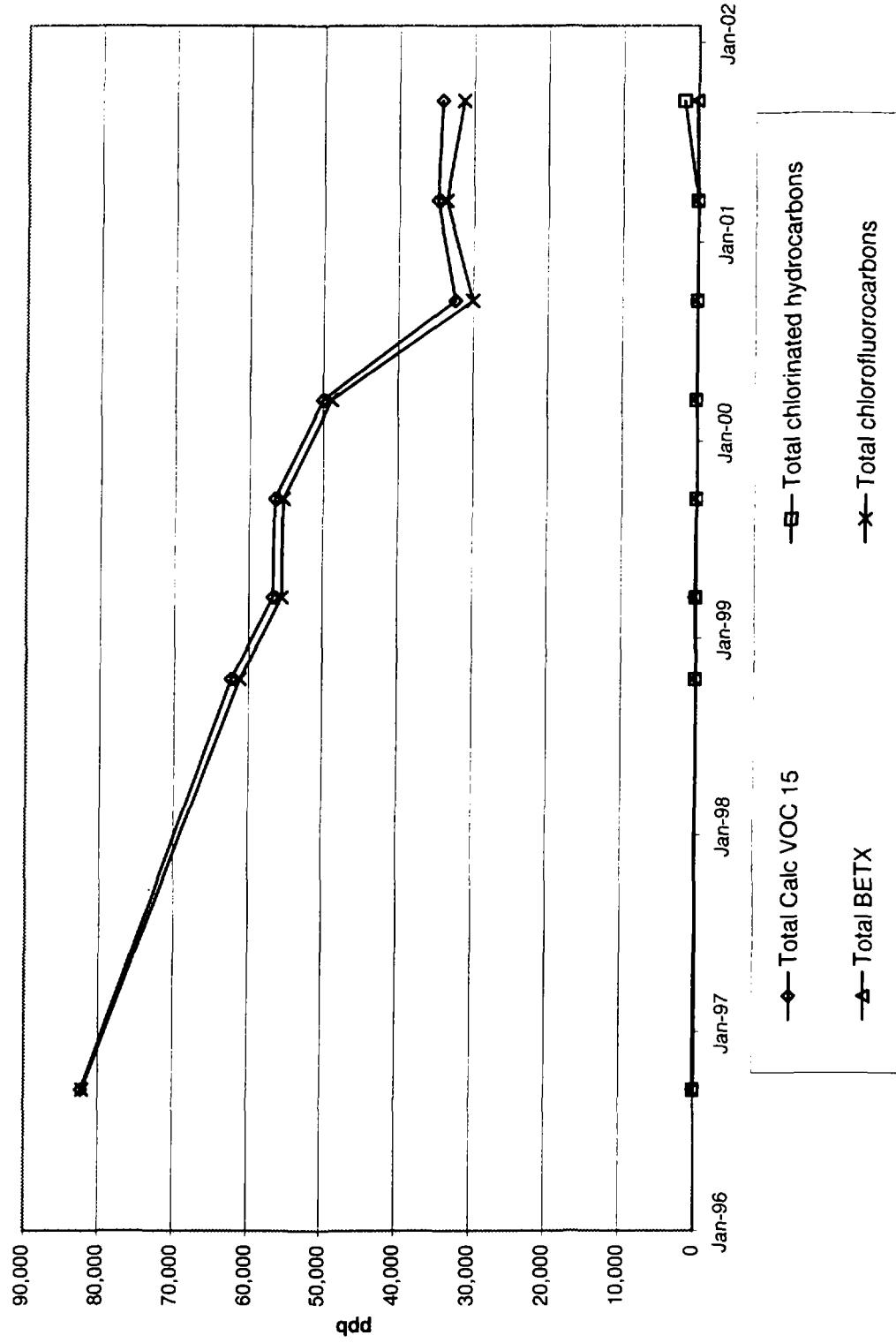
Total chlorinated hydrocarbons: Non-detect values=zero.

Non-detect values=zero.

Non-detect values=zero.

**Accra Pac - Warner Baker Site  
2626 Industrial Parkway  
Elkhart, Indiana**

MW-15



**Accra Pac - Warner Baker Site  
2626 Industrial Parkway  
Elkhart, Indiana**

**Groundwater Monitoring Data**

MW-15	9/30/1996	10/1/1998	3/30/1999	9/30/1999	3/29/2000	9/25/2000	3/22/2001	9/19/2001
1,2-Dichlorobenzene	<1	<200	<200	<200	<200	<200	<200	<200
1,1-Dichloroethane	<1	<100	<100	<100	<100	<100	<100	100
1,2-Dichloroethane	<1	<100	<100	<100	<100	<100	<100	<100
1,1-Dichloroethene	<1	<200	<200	<200	<200	<200	<200	<200
c-1,2-Dichloroethene	<1	<100	<100	<100	<100	<100	<100	<100
Dichlorofluoromethane	110	<500	<500	<500	<500	<500	<500	<500
Ethylbenzene	<1	<100	<100	<100	<100	<100	<100	158
Tetrachloroethene	<1	<100	<100	<100	<100	<100	<100	980
Toluene	<1	<100	<100	<100	<100	<100	<100	<100
1,1,1-Trichloroethane	<1	<100	<100	<100	<100	<100	<100	730
Trichloroethene	<1	<100	<100	<100	<100	<100	<100	<100
Trichlorofluoromethane	<1	<200	<200	<200	<200	<200	<200	980
1,1,2-Trichlorotrifluoroethane	82000	61200	55500	55400	48900	30100	33700	30400
Vinyl chloride	<1	<200	<200	<200	<200	<200	<200	<200
Xylenes	140	<200	200	<200	<200	<200	<200	<200
Total Calc VOC 15	82256	62350	56750	56550	50050	32450	34850	34198
Total chlorinated hydrocarbons	0	0	0	0	0	0	0	0
Total BETX	140	0	200	0	0	0	0	158
Total chlorofluorocarbons	82110	61200	55500	55400	48900	30100	33700	31380

**NOTE:**

For graphing purposes, non-detect values are calculated as follows:

Total Calc. VOC 15:

Non-detect values=1/2 detection limit.

Total chlorinated hydrocarbons: Non-detect values=zero.

Total BETX: Non-detect values=zero.

Total chlorofluorocarbons: Non-detect values=zero.